

ETHERNET

- The standards & protocols
- Physical components.
- Media access operation.
- Logical link, address structure.
- Bridges / Switches etc.

802.3 CSMA/CD BUS

Derivative of work by:

- Xerox
- Intel
- Digital (DEC)

Published in Ethernet (DIX Blue Book) V1.0,
September 30th 1980.

802.3 Revision D dated December 1982 published by
IEEE.

Revision F published July 1984 and also issued as DP
8802/3 by the ISO.

OPERATION:

CARRIER SENSE MULTIPLE ACCESS WITH COLLISION DETECTION.

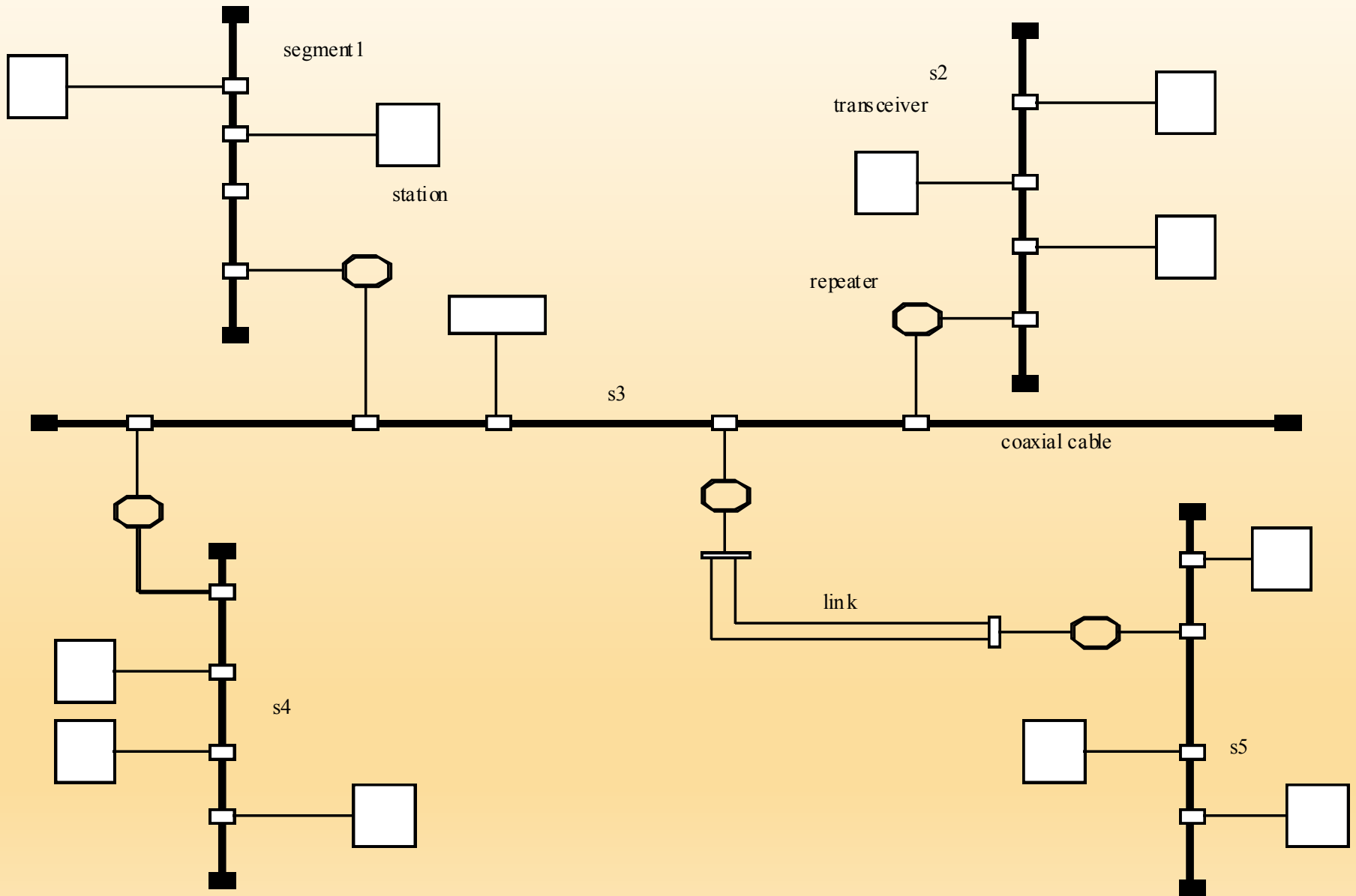
DISTRIBUTED CONTROL

- Contend for use.
- Acquire access and send a data packet.
- No priority.

Simple algorithm:

1. Check if active, if yes return to 1.
2. Transmit and check for collisions.
3. Collision ? if so transmit JAM and then delay and go back to 1.
4. Transmission completed.

TYPICAL LARGE ETHERNET



COMPONENTS OF A TRADITIONAL CO-AX ETHERNET

- Coaxial cable
- transceiver (MAU)
- repeater
- terminator
- Point to point link
- Internetworking devices
 - Bridge (selective forward of packets between similar networks).
 - Router (IP level forward, possible between different network types).